

# LOOP EXTENDER WITH COMMUNICATIONS, CONTROL, AND DIAGNOSTICS

## ABSTRACT OF THE DISCLOSURE

In accordance with the present invention, a DSL network for improving the transmission of DSL signals over a local loop is disclosed. The DSL network includes a loop extender with communications, control, and diagnostic functionality, and a central office including a DSLAM and a central office controller coupled to the loop extender via the local loop for controlling the loop extender.